```
ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
L9
AN
    2001:228838 CAPLUS
    134:254016
DN
    Method and device for utilizing heat in the production of
TI
    1,2-dichloroethane by the direct chlorination of
     ethylene'
    Motz, Joachim
IN
    Krupp Uhde G.m.b.H., Germany
PΑ
SO
    PCT Int. Appl., 19 pp.
    CODEN: PIXXD2
DT
    Patent
    German
LΑ
FAN.CNT 1
    PATENT NO.
                      KIND
                               DATE
                                        APPLICATION NO.
                                                               DATE
                                         ______
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ΡI
    WO 2001021564
                        A1 20010329 WO 2000-EP8963
                                                                 20000914
        W: JP, NO, US
        RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
            PT, SE
                                          DE 2000-10037323
    DE 10037323
                        A1
                               20010412
                                                                 20000729
    EP 1214279
                                          EP 2000-966000
                               20020619
                        A1
                                                                 20000914
    EP 1214279
                        В1
                               20040526
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, FI, CY
    JP 2003509480
                        T2
                               20030311
                                          JP 2001-524946
                                                                 20000914
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    AT 267788
                               20040615
                                          AT 2000-966000
                                                                 20000914
                       Α
                              20020320 NO 2002-1393
20040217 US 2002-70842
    NO 2002001393
                                                                 20020320
                       B1
    US 6693224
                                                                 20020522
US 2004059166 A1
PRAI DE 1999-19945355 A
                              20040325
                                        US 2003-670970
                                                                 20030925
                       A
                              19990922
    DE 2000-10037323
                       A
                              20000729
    WO 2000-EP8963
                        W
                              20000914
    US 2002-70842
                        A1
                              20020522
AΒ
    A method for the production of 1,2-dichlorethane (I) by direct
    chlorination using chlorine and ethene in which, despite low
    reaction temps. during direct chlorination, reaction
    heat produced is nevertheless used. Vaporous I obtained in a
    direct chlorination reactor is compressed and
    transported to heat exchangers where heat is given off by the I. A
    turbocompressor, for compressing, is arranged directly after the
    direct chlorination reactor.
             THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
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ALL CITATIONS AVAILABLE IN THE RE FORMAT

RE.CNT 4

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L15 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
AN
    1993:605874 CAPLUS
    119:205874
DN
TI
    Recovery of heat from 1,2-dichloroethane vapors
    Winhold, Michael; Perkow, Helmut; Link, Gerhard; Schwarzmaier, Peter;
IN
    Krumboeck, Reinhard; Kuehn, Wenzel
    Hoechst A.-G., Germany
PA
    Ger. Offen., 5 pp.
SO
     CODEN: GWXXBX
DT
     Patent
LΑ
    German
FAN.CNT 1
                                          APPLICATION NO.
    PATENT NO.
                       KIND DATE
                                                                  DATE
                               _____
                        ____
                               19930325 DE 1991-4131576
    DE 4131576
                        A1
PΤ
                                                                   19910923
PRAI DE 1991-4131576
                               19910923
    In the title process, which recovers the heat of direct
     chlorination at low temps. and suppresses cracking, the
    heat of chlorination of C2H4 is used in the evaporator
    of the high-boiler separation and part of the dichloroethane vapors
     is fed to a vacuum evaporator, part to a condenser, and part to a
     compressor and then the evaporator of the dewatering stage,
    optionally with part of the compressed gas being fed to the
     evaporator of the HCl stripper. A flow diagram of the process is
     included.
L15 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
AN
     1969:523504 CAPLUS
    71:123504
DN
TI
    Oxychlorination of hydrocarbons
IN
    Suzuki, Yoshitaka; Takenoue, Atsushi
PA
    Toa Gosei Chemical Industry Co., Ltd.
    Ger. Offen., 21 pp.
SO
     CODEN: GWXXBX
DT
     Patent
LΑ
    German
FAN.CNT 1
                                      APPLICATION NO.
     PATENT NO. · KIND DATE
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                                           -----
                                19690807 DE 1968-1805698
PΙ
    DE 1805698
                                                                  19681028
    FR 1594693
                                            FR
PRAI JP
                                19671101
AΒ
    Unreacted HCl is recovered by absorption in water from the gaseous
    reaction products and by distillation from the aqueous acid formed to improve
    oxychlorination of hydrocarbons. Thus, C2H4 0.11, air 0.29, HCl and recovered HCl 0.24 kg. mole/hr., and recycled gas [mostly (0.66 kg.
    mole/hr.) N] are each compressed, mixed, and the mixture is led
     into a glass-lined reactor over a catalyst of Cu, K, and Mo chlorides on
     diatomaceous earth. At 280-320° and 2.7-3.5 kg./cm.2, a mixture of
     C2H4Cl2 0.1, water vapor 0.12, and N 0.02 kg. mole/hr. containing
     small amts. of HCl, C2H3Cl3, EtCl, etc., is formed and led into an
     absorption column, where it is treated with 3.06 kg. mole/hr. 19.4% HCl at
     87° and 26 kg. mole/hr. water at 81°; the bottom pressure is
    maintained at 1500 mm. and the temperature of aqueous HCl at 90°; the
    pressure at the top reaches 1300 mm., and 0.38 kg. mole/hr. water
    vapor at 81°, 0.1 kg. mole/hr. C2H4Cl2, N, and small amts.
    of C2H3Cl3 and EtCl are obtained at the upper end; with 5.08 kg. mole/hr.
     20.5% aqueous HCl at 90° removed at the bottom. This aqueous acid is
    distilled at 2.5 kg./cm.2 to yield 0.02 kg. mole/hr. HCl, which is recycled,
    and, at the bottom, 3.06 kg. mole/hr. 19.4% aqueous HCl which is brought to
     87° in a heat-exchanger and returned to the absorption
     column. The HCl-free product is condensed at 0° to remove water
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vapor and chlorohydrocarbons, which are separated; the gaseous mixture (mostly N) is recycled.

L15 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1966:438119 CAPLUS

65:38119 DN

OREF 65:7055e-h,7056a

Vinyl chloride ΤI

PA Dynamit-Nobel A.-G.

SO 12 pp.

DT Patent

LΑ Unavailable

FAN.CNT 1

RE 660000 APPLICATION NO. DATE PΙ BE 666823 19660113 BE FR 1440423 FR NL 6509435 NLPRAI DE 19640722

In the preparation of H2C:CHCl from HCl and C2H2 at atmospheric pressure with HqCl2 as

catalyst, increased yields and catalyst economy are obtained by diluting the feed with a recycled product fraction. By this means the temperature is regulated independently of the reactant volume and is maintained at the same range throughout the reactor so that sublimation of the catalyst from locally high temperature is avoided. The ratio of fresh feed to recycle gas is from 1:1-1:3 with the rate of feed and the degree of external cooling adjusted in such a way that the synthesis takes place at 110-70° in all areas of the reactor with an C2H2 conversion of 97 mole-% and a yield of 150-180 kg./hr./m.3 of contact mass. The process includes a means of washing the unreacted starting materials with a liquid product stream and sending them back into the reactor, whereby almost complete utilization of the HCl and C2H2 is achieved. Thus, 418 kg. 98.8% C2H2 and 595 kg. 98.8% HCl are mixed and introduced, along with 64 g. mixture (HCl 68.3, C2H2 21.1, and H2C:CHCl 10.6%) recovered from preceding operation, into a reactor charged with HgCl2 on activated C. The vapor-gas mixture leaving the reactor is split into a product stream and a recycle stream, the latter being returned via a ventilator to the reactor at such a rate as to effect the conditions specified above. The product stream containing H2C:CHCl 93.5, other chlorinated hydrocarbons 0.3, HCl 4.2, C2H2 1.3, and inert material 0.7% is cooled (35°), compressed (7 atmospheric), further cooled to condense a portion of the H2C:CHCl, and separated into a gaseous and a liquid phase. The latter, containing <50 ppm. HCl and C2H2 is cooled to -25°, and introduced into the top of a scrubbing tower where it serves to remove HCl and CH2 from the gaseous fraction which has, meanwhile, been cooled to -25° separated from condensate, and introduced at the bottom of the tower to pass counter-currently through the descending liquid fraction. The gaseous mixture (11 kg.) leaving the top of the tower consists of 500-700 ppm. HCl and C2H2, 20.5% H2C:CHCl, and 79.5% inert material. The liquid passes from the base of the tower through a heat exchanger into a separator (from which separated gases are recycled to the reactor) and then is pumped into a degassing tower where, at 6.5 atmospheric and 42-45°, the H2C:CHCl is separated from HCl and C2H2. The overhead fraction, after further removal of H2C:CHCl by return passage through the condensing and separating members of the system, constitutes the 64 kg. feed component mentioned above. The product is pumped from the base of the degassing tower into a neutralizer containing KOH and is then distilled to remove high boiling hydrocarbons.

L15 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

AN1963:66073 CAPLUS

DN 58:66073

OREF 58:11216f-h,11217a

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TI Methyl chloroform
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- IN Vogt, Harvey J.
- PA Pittsburgh Plate Glass Co.
- SO 5 pp.
- DT Patent
- LA Unavailable

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3065280 GB 916407		19621120	US 1960-56941 GB	19600919

AΒ Processes are disclosed for the production of MeCCl3 (I) as follows: ethylene (II) or CH2ClCH2Cl (III) was chlorinated to form CH2ClCHHCl2 (IV) and HCl; IV was dehydrochlorinated to form CH2CCl2 (V), and to V was added HCl to form I. This was accomplished by feeding 192.67 lb. Cl and 71.81 lb. II (98 mole-% II) to a quantity of III containing about 8.4% by weight of IV, and 0.06% FeCl3 at 84°. Boiling was maintained by heats of reaction to form III and IV. The vapors of III and IV were condensed and part of the condensate returned to the reactor. The remainder of the condensate distilled gave 236.16 lb./hr. III. The still bottoms, containing 1.15 III, 19.52 IV, 1.8 (CHCl2)2 (VI), and 0.52 lb. C2HCl5 per hr., were fed to another still column from which the III and IV were returned to the reactor and the bottoms forwarded to another still, from which 19.36 lb. IV with a trace of VI was distilled and forwarded to the dehydrochlorinator with 6.93 lb. NaOH per hr. as an sq. 10.5% solution with 14.5% NaCl. Steam was introduced into the dehydrochlorinator to maintain temps, ranging from 115° at the bottom to 33° at the top. NaCl, H2O, and some tars were removed from the bottom. V, which was distilled and dried, was forwarded to the hydrochlorinator at the rate of 13.44 lb./hr., with 5.3 lb. HCl from the reactor, which HCl had been cooled to 35° and compressed to 13 atmospheric to cause separation of 95% of the III and almost all of the IV present in the HCl. Hydrochlorination was conducted in liquid I containing 0.3% FeCl3, 0.09 lb. added per hr., at the b.p. of I. I (17.51 lb.) was removed from the hydrochlorinator per hr.

(FILE 'HOME' ENTERED AT 12:51:20 ON 27 OCT 2006)

L1	FILE 'F				RED AT 12:5: HLOROETHANE		7 OCT 2	2006		
L2	1 S CHLORINE/CN									
L3	1 S ETHENE/CN									
	FILE '	CAPLU	IS, C	'AOLD	ENTERED AT	12:52:29	ON 27	OCT 2006		
L4	14	1590	S L1	-						
L5		439	S L1	AND	L2					
L6		118	S L	AND	L3					
L7		70	S Le	AND	CHLORINAT?					
L8		3	S L7	AND	COMPRESS?					
L9		2	S L8	AND	DIRECT					
L10		1	S L8	NOT	L9					
L11		910	S L4	AND	HEAT					
L12		146	S L	1 AND	CHLORINAT?					
L13		35	S L1	.2 AND	VAPO?					
L14		5	S L1	.3 AND	COMPRESS?					
L15		4	S L	4 NOT	L8					